

NuScaleDCRaisPEm Resource

From: Cranston, Gregory
Sent: Tuesday, July 25, 2017 9:39 AM
To: RAI@nuscalepower.com
Cc: NuScaleDCRaisPEm Resource; Lee, Samuel; Chowdhury, Prosanta; Li, Chang; Markley, Anthony; Dias, Antonio
Subject: RE: Request for Additional Information No. 105, RAI 8920 (9.2.7)
Attachments: Request for Additional Information No. 105 (eRAI No. 8920).pdf

Attached please find NRC staff's request for additional information concerning review of the NuScale Design Certification Application.

Please submit your technically correct and complete response within 60 days of the date of this RAI to the NRC Document Control Desk.

If you have any questions, please contact me.

Thank you.

Gregory Cranston, Senior Project Manager
Licensing Branch 1 (NuScale)
Division of New Reactor Licensing
Office of New Reactors
U.S. Nuclear Regulatory Commission
301-415-0546

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Request for Additional Information No. 105 (eRAI No. 8920)

Issue Date: 07/25/2017

Application Title: NuScale Standard Design Certification - 52-048

Operating Company: NuScale Power, LLC

Docket No. 52-048

Review Section: 09.02.07 - Site Cooling Water System (NuScale SMR design)

Application Section: 9.2.7

QUESTIONS

09.02.07-2

10 CFR 52.47(a)(2) requires that a standard design certification applicant provide a description and analysis of the structures, systems, and components (SSCs) of the facility, with emphasis upon performance requirements, the bases, with technical justification therefor, upon which these requirements have been established, and the evaluations required to show that safety functions will be accomplished.

10 CFR 52.47(c)(2) requires that a standard design certification of "a nuclear power reactor design that ... uses simplified, inherent, passive, or other innovative means to accomplish its safety functions must provide an essentially complete nuclear power reactor design except for site-specific elements such as the service water intake structure and the ultimate heat sink, and must meet the requirements of 10 CFR 50.43(e)."

FSAR Tier 2, Section 9.2.7.2.1 states that the SCWS provides cooling water to the following plant auxiliary systems:

- condenser air removal system,
- chilled water system,
- reactor component cooling water system,
- reactor pool cooling system,
- spent fuel pool cooling system,
- auxiliary boiler blowdown cooler,
- process sampling system chillers,
- condensate and feedwater sample coolers,
- main steam sample coolers,
- turbine generator heat exchangers, lube oil, and governor, and
- instrument air compressors and coolers.

To clarify the above statement, the applicant is requested to:

- provide the heat loads of all the above systems,
- demonstrate that the cooling tower has sufficient heat removal capability, and
- discuss how the operators could know that there is insufficient heat removal capability in the SCWS and what procedures would be required for the operators to take.